Technology-Enabled Service Delivery: Reconciling Managerial and Customer Perspectives

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The use of technology to enable or facilitate the delivery of services can benefit customers and service providers alike. Correspondingly, however, the purposes to which technology is put, and the manner in which it is used, may run the risk of disenfranchising customers. This might be due to technical faults and failings, but also due to situations in which human interaction is substituted or diminished by a use of technology that is more in a service organisation's interests than in those of its customers.

In this paper we argue that the use of technology in the delivery of services needs to be considered carefully, with regard for the capacity, willingness, sensitivities and expectations of customers in each particular service setting, and mindful of the importance of human interaction in most service encounters.

Introduction

Across a range of industries computer and telecommunications technology is being increasingly used to enable and/or to enhance marketplace exchanges in a variety of service settings, and to create new or improved benefits to consumers and producers alike. At the same time, however, technology can malfunction or break down, and its manner of use may create "technology-induced hostility" in customers. In other words, the adoption of technology to enable service delivery is something of a double-edged sword: it can have both a positive and a negative impact on customers, their attitudes, perceptions and behaviour, and therefore reflect well or badly on a service provider. Thus, a key issue for service providers is to determine what is likely to be suitable technology, that is, how technology should be adopted in such a way as to be acceptable and satisfactory to customers and service organisations alike.

In this paper we canvass a number of considerations important to management and customers respectively in the adoption of technology to facilitate service delivery, and discuss how needs of each might be reconciled to mutual satisfaction. A comparative taxonomy provides the structural means of organising the discussion and, also, a basis for research.

Technology In Use - Satisfying Both Managerial and Customer Needs

Technology has the potential to be employed in service organisations to the benefit of customers, employees and management alike. It can be used to provide customers with additional or extended services, greater convenience and control, potentially more reliable information delivery, access to data and support services that may not have otherwise been available, and the ability to conduct transactions in such a way that doesn't necessitate the customer visiting the service organisation. Correspondingly, technology can be used by management to permit faster response to customer enquiries and problems, to improve internal efficiency and productivity, to raise the switching costs of buyers, and to gain a number of distinctive and differentiating competitive advantages. In addition, the creation of customer self-service options allows the costs associated with servicing customers personally to be minimised. By the same token, technology-enabled service delivery can impede customer access, frustrate and intimidate users, de-personalise the service encounter, and create a distance between customers and service personnel. This means that a service provider considering the use of technology to enable service delivery should do so with reference to customer attitudes and requirements as well as managerial needs. The taxonomy provided in Exhibit 1 summarises, compares and contrasts considerations from each of these two perspectives. For the sake of convenience these various considerations are organised into three main categories: *operational considerations*, *customer response considerations*, and *positioning considerations*. Because of space limitations here we will focus on just the first two of these.

Exhibit 1 about here

Operational Considerations

As we have already pointed out, a service provider has the opportunity to gain a number of benefits by employing technology to facilitate service delivery. Customers may also gain from these initiatives, but this should not be assumed. For example, improved operational efficiency is meaningful to a customer only if a service organisation's use of technology is perceived to improve the *competence of service delivery, is easy and convenient to access and use*. Similarly, organisational productivity and operational cost gains need to be balanced against the impact of these on a customer, and what customers require in terms of information, *personal contact and interaction*, and time to satisfy individual needs.

Service Delivery Competence

Efficiency and reliability of service delivery can only be judged by customers with reference to direct experience. A service provider's use of technology may or may not contribute observably to this experience in some way or another. Ultimately, however, a customer is only concerned with how well their particular needs and wants have been satisfied. In other words, it is the competence of a service provider to do this satisfactorily that is important to customers, whether the service has been technologically facilitated or not. here technology has been used in such a way that, in a customer's eyes, the service has been improved or enhanced in some way, then it is likely that this will be reflected favourably in that customer's assessment of the service experience and the service provider's competence. he obverse, however, also applies.

If the aim of a service provider is to achieve standards of service delivery efficiency and reliability that are important to customers, then the use of technology must be planned and managed in such a way that is customer needs-driven and that consequently reflects positively on a service provider's observable competence.

Ease and Convenience of Use

The benefits of technology are limited by the capacity and willingness of the consumer. Convenience seems to be the key reason for consumers adopting a new technology (Cohen & Gadd 1996; Burke 1997). However, the employment of technology, especially complicated procedures, can also intimidate, frustrate and annoy users, and customers may be put off or disenfranchised by having to deal with machines rather than human beings (Prendergast & Marr 1994; Marr & Prendergast

1991). Negroponte (1995) noted that the fax machine, although technologically inferior, eclipsed e-mail adoption in the 1980s. This is because fax machines were standardised and easy to use. Similar problems have occurred with Internet-based services. Kraut et al (1996) reported that a residential Internet trial revealed that, in addition to forgetting passwords and misusing and misunderstanding interface instructions, consumer also had to contend with busy signals and message drop-out. Even if the technology does not malfunction, consumers may, in that they may not have the capacity to 'manage' the new technology. Their lack of skill can then result in frustration and hostility. Furthermore, even within willingness there are degrees of acceptance and use. While consumers are willing to interface with technology for some aspects of a purchase, security and legal factors can inhibit the scope of purchase behaviour. For example consumers are willing to withdraw money and to transfer cash between account but are unwilling to deposit via an ATM.

Consequently, any adoption of technology needs to be planned and implemented in such a way that it complements the capacity and willingness of customers to make use of it. Consideration may need to be given to such factors as the time and assistance needed to use technology-enabled service delivery options. Service providers may need to recognise that forcing technologies on customers, particularly complex technologies that do not enhance (offer a relative advantage to) the exchange process, may create hostile consumers.

The Importance of the Human Element

The element of personal contact and interaction cannot be over-emphasised. That customer service personnel play a crucial boundary-spanning role between a service organisation and its customer is well supported (Thompson 1967a & b; Aldrich & Huber 1977; Bateson 1995). This can mean two things. One, that in this capacity they represent a service organisation to its customers; and two, that the relationship bond itself is a key element of the market offering. In both instances the presence of personnel can facilitate the exchange of information between customers and the service provider, and create something of .the total service experience for customers. Moreover, where the customer service personnel are viewed as a key part of the service product they help to give a service organisation its particular identity, personality and competitive differentiation (Booms & Nyquist 1981;

Solomon, Surprenant, Czepiel & Gutman 1985; Carlzon 1987; Schneider & Bowen 1993.) Consequently, how a service is provided is often just as, if not more than, important as the service offering itself (Gronroos 1983; Berry, Zeithaml & Parasuraman 1985; Swartz & Brown 1989). This also means that a service organisation's competitive advantage may reside in its service personnel, their particular nature, personality, experience and expertise, because they and their individual qualities are not easily imitated or replicated (Schneider & Bowen 1993). Therefore care needs to be taken by service providers to ensure that the adoption of technology to facilitate service delivery doesn't compromise, or come at the expense of, this important human element.

Customer Response Considerations

Technology offers service organisations the means of providing faster customer response, more consistently reliable standards of service delivery, and additional services, and can also be used to facilitate the establishment and maintenance of customer-service provider relationships. At the same time, however, it needs to be recognised that these same considerations may take on a different meaning and importance from a customer's perspective. For example, customers may be more concerned with the nature of *customer response and service delivery*, the nature of *the customer-service provider relationship*, and the manner in which *particular concerns and complaints* are handled.

The Nature of Customer Response and Service Delivery

An important distinction can be made between customer needs and wishes. The former serve to define the service product and the place of service delivery. The latter, however, define individual customer requirements and expectations, and how individual customers want to be treated (Gronroos 1990). Typically, customers are required to visit the place of service provision in order to avail themselves of the service being offered. This provides service providers with a unique opportunity to get to know customers as individuals rather than as groups or segments. Consequently, individual expectations, values, wishes and desires can be discerned and catered for in a very personal way. This, in turn, supplies the grounds for providing the confidence, social and special treatment benefits discussed above.

The process of discerning and catering for customer expectations, values, wishes and desires individually and personally implies personal interaction and exchange of information (Czepiel, Solomon, Surprenant & Gutman 1985; Duncan & Moriarty 1998). Technology may play a role in this, particularly in capturing and manipulating customer profile data, but converting this knowledge into personalised service delivery necessitates human interaction. In this way customers are treated as individuals, can be made to feel special, and to feel that the service offering has been tailored or customised to suit their particular requirements. As a consequence, customers' self-esteem is enhanced and their value to a service organisation is demonstrated (Schneider & Bowen 1995).

Research has shown that in particular service settings service delivery characterised in this way is desired by customers (Parasuraman, Berry & Zeithaml 1991; Cottrell 1994); is crucial to building meaningful and mutually beneficial relationships with customers (Berry 1983); and is more likely to result in customer satisfaction (Solomon, Surprenant, Czepiel & Gutman 1985; Schneider & Bowen 1995; Parasuraman, Zeithaml & Berry 1985; Spreng, MacKenzie & Olshavsky 1996). This suggests that service organisations should aim to take full advantage of the opportunity afforded as a consequence of customers being physically present in the place of service delivery, by investing time and effort in dealing with customers individually and personally, as opposed to collectively, impersonally and at arm's length.

It bears remembering that a service setting provides a unique opportunity to meet, interact with, and get to know customers individually and personally. Therefore the decision to employ technology for purposes such as those described above might need to be considered as a form of trade-off between, on the one hand, the mutual benefits to be gained and, on the other, the possible cost to one or more of the parties as a consequence of holding the customer at arm's length.

The Customer-Service Provider Relationship

Where the quality of the interaction forms a key benefit of the market offering effective relationship management is mandatory. A relationship between a customer and a service provider is formed and maintained because of the attitudes and accompanying feelings that one party has for another and how these are reciprocated, the trust that one party has in another, and the commitment by each party to investing in the relationship to mutual benefit.

Communication in all its different forms provides the means by which attitudes are shaped, feelings are expressed and shared, trust is inculcated, and commitment is manifest and reinforced.

This appears to be supported by some of the results of recent research that investigates how customers articulate the benefits received as a consequence of long-term relational exchanges with service firms (Gwinner, Gremler & Bitner 1998). The researchers conclude that '...consumers in long-term relationships with service firms experience three primary types of benefits: confidence benefits, social benefits, and special treatment benefits.' By confidence benefits they mean the trust that a customer develops in a service provider as a consequence of concern shown for the customer, and how the customer feels they have been treated. By social benefits they mean the customer's sense of familiarity and friendship with individual service personnel, and the personal recognition that is associated with this. By special treatment benefits they mean the extent to which a customer feels that they have benefited, or been rewarded, in some special way for their patronage and loyalty. The researchers conclude that confidence and social benefits are by far the most important to customers and their sense of customer-service provider relationship.

Service providers need to ensure that any technology used does not create a 'distance' between the service personnel and the customer and, thereby, disaffect the sense of personal relationship and thus the 'quality' of the relationship. Technology provides only a tool, a technological means to facilitate communication, and the development of trust and commitment that are values shared by people. In other words, whether or not a relationship is formed and maintained between two parties hinges principally on the personal qualities, values and behaviour in which it is grounded. Technologies that facilitate the formation and maintenance of the relationship are secondary to these underpinning qualities, values and behaviour. Technology may be used to facilitate or enhance the formation and maintenance of these relationships where the customer base accepts the technology and has the ability to use it. It is submitted, however, that the extent to which a customer-service provider relationship exists, will hinge not so much on these facilitating technological means of service delivery as on the suitability and reliability of the technology service product and the people providing it, their ability and willingness to respond quickly and satisfactorily to a customer's special needs, requests or problems, and the sense of trust in, and

commitment to, the service provider that the customer feels as a consequence of this behaviour.

Risk Reduction and Complaints Handling

Customers often perceive an element of physical, social, performance or financial risk associated with market place exchanges (Bauer 1960; Kaplan & Szybillo 1974; Guseman 1981). The degree of risk that a consumer associates with the exchange is particularly relevant to marketers. Since adequate evaluation is a function of experience and the credence attributes of a product it has been suggested that this risk factor is perceived to be higher in a service setting (Zeithaml 1981; George, Weinberger & Kelly 1985; Parasuraman, Zeithaml & Berry 1985; Murray & Schlacter 1990). Furthermore, a customer's sense of risk is likely to be heightened if the service is relatively new, complex and highly intangible, and the customer is relatively inexperienced (Bettman 1973; Dowling 1986).

Customers attempt to reduce or ameliorate this perceived risk in a variety of ways: by seeking (more) information, references, guarantees or warranties, by taking into account the history and reputation of the service provider, by considering the appearance of the service operation, and by seeking assistance from service employees (Bateson 1995). Information about a service organisation, its history and reputation, can be documented in a variety of forms, advertised and publicised, and references or referrals encouraged from extant customers. When, however, a customer visits a service organisation, its representatives or agents, personally for information as a preface to final decision-making and consumption, the role of contact service personnel in dealing with particular questions or concerns, and in sensing and helping to alleviate any perceived risk on the part of the customer, is vital. At this point it is the human interaction between customer and service provider that will serve to build or erode the customer's confidence and trust, and the perceived competence and credibility of the service organisation, and therefore affect directly the decision to purchase or not.

Return visits to known service providers may also invoke a sense of risk or anxiety because of the possible cost (medical, legal and hospital fees for example), the fear of personal pain or stress (visits to doctors, dentists and sports clinics for example), or some other personal concern (such as a fear of flying or heights). In each of these and other similar situations the customer's anxiety will be

alleviated only by the understanding, empathy and responsiveness of the service personnel encountered and by the knowledge that the customer has someone to turn to if needed. The key word here is *someone*, as opposed to *something*.

Customers also expect to find someone to whom they can turn to voice complaints. The manner in which this is done may be anywhere from passive to highly aggressive. In all cases of complaining behaviour, however, the customer is expressing their dissatisfaction with something or somebody, and their desire that the cause of their dissatisfaction or unhappiness be rectified. In this sense complaining behaviour may also be seen as another form of social interaction (Goodwin & Verhage 1990). This is to say that it is something that people expect to engage in with other people.

The service organisation must be prepared for, and to deal satisfactorily with, customer complaints. This means identifying and resolving the grounds of complaints in such a way that is satisfactory to customers, service personnel and the service organisation. This implies a service system that facilitates the registration or expression of complaints, acknowledgment by the service provider that the customer has a complaint to make, and interactive communication to identify the cause of complaint and ways by which it may be resolved. Responsiveness, a listening capacity, patience and empathy on the part of the service provider are personal qualities that enable this process, as are the interpersonal skills necessary to dealing with irate customers.

It has been observed that in high-contact service encounters customers typically have high expectations regarding interpersonal treatment in complaint handing and resolution, and that ownership of the problem by the service provider, genuine concern for the customer, politeness, empathy, and honesty are crucial to recovering the situation and gaining the complaining customer's trust and commitment (Tax, Brown & Chandrashekaran 1998). Clearly this should be left to an 1800 number and a computer-facilitated interaction alone.

Concluding Remarks

We submit that in situations where:
- the customer expects a high level of personal contact,

- there is insufficient or inadequate understanding of customers' values, expectations and preferences,
- the introduction of non-human means of service delivery is motivated more by organisational interests than customer interests,

the service provider is at risk unless a careful assessment of their consumers' situation is undertaken.

Ultimately what is most important to, and valued by, a customer is not so much the facilitating technological means of service delivery but the sense of confidence and trust in, and commitment to, the service provider that the customer feels. This sense of confidence, trust and commitment is determined by the suitability and reliability of the service product and its manner of delivery; the people providing it, and their ability and willingness to respond quickly and satisfactorily to a customer's special needs, requests or problems. Similarly, the use of technology for communication, contact and relationship-building purposes should be considered not as a substitute for human interaction but as a means of facilitating this. Therefore a service provider should consider carefully the form and manner of communication and service desired by customers, and then the role that technology might play in facilitating this, rather than assuming that technological means will be acceptable and satisfactory to customers. Correspondingly, in situations where a sense of individualisation and personalisation are important to a customer, the use of technology for communication purposes should not compromise this. This demonstrable concern for, and commitment to, the interests and sensitivities of customers also helps to build trust and loyalty, and to nurture customer-service provider relationships.

To determine the most efficient, effective and mutually acceptable technology-personnel mix, the consumer's perspective needs to be known and understood. For service providers, the problem is essentially one of deciding if a new and available technology, presumably one that would enhance the position of the provider, would be acceptable to consumers and not detract from the overall service experience

References
Available upon request.

EXHIBIT 1: **A Comparative Taxonomy of Interests in the Employment of Technology-Enabled Service Delivery**

	Managerial	**Customer**
Operational Considerations	• Service delivery efficiency and reliability • Productivity improvements • HR costs • Nature and cost of place of service delivery	• Service competence and ease of use • Time for personal attention • Need for personal contact/ interaction • Service availability and convenience
Customer Response Considerations	• Speed and throughput • Consistency and standardisation • Relationship facilitation	• Individual needs satisfaction, problem solving & attention • Personalisation • Nature of relationship
Positioning Considerations	• Competitive differentiation and advantage • Switching costs • Quality image	• Benefits • Reasons to stay • Quality in use